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PUBLIC UTILITIES  
COMMISSION

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of )

PUBLIC UTILITIES COMMISSION )

Instituting a Proceeding to Investigate )  
the Implementation Of Feed-in Tariffs )  
\_\_\_\_\_ )

Docket No. 2008-0273

**HAIKU DESIGN AND ANALYSIS**  
**FINAL STATEMENT OF POSITION**  
**AND**  
**CERTIFICATE OF SERVICE**

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**HAIKU DESIGN AND ANALYSIS**

**FINAL STATEMENT OF POSITION**

Carl Freedman, dba Haiku Design and Analysis (HDA) respectfully offers its Final Statement of Position (FSOP) regarding the implementation of feed in tariffs for Hawaiian Electric Company, Inc., Maui Electric Company Ltd. and the Hawaii Electric Light Company, Ltd. (collectively: HECO Companies).

HDA's position in this docket has not changed since filing its Opening Statement of Position (SOP). Despite the responses to information requests and what was learned at the technical workshop and settlement conference in this docket, HDA still finds that the same information it noted was missing at the time of its SOP remains missing now. HDA therefore relies on and reiterates its SOP as part of HDA's FSOP in this docket and incorporates it here by reference.

In particular, there is still no generation and transmission system plan that identifies how much of each type of generation is compatible or necessary to accommodate new renewable generation. It is not known how much of each type of renewable generation can

be accommodated. It is not known what measures, improvements and investments in utility system infrastructure would be necessary to accommodate various amounts of new renewable generation. It is not known when, whether or to what extent any measures being taken to accommodate substantial amounts of new renewable generation on the utility systems will be effective. There is no estimate of any sort of what impacts the proposed (or any other) feed-in tariffs will have on generation costs or retail rates. The rate impacts are entirely unknown.

Despite the title of this FSOP, HDA does not consider its positions to be final. Indeed, HDA finds its positions to be tentative pending further examination of information it still hopes may be provided in this docket. HDA will reserve statement of its final positions on the issues in this docket until the briefs.

#### **POSITIONS ON THE ISSUES IDENTIFIED IN THE PROCEDURAL ORDER:**

##### **A. Purpose of Project-Based Feed-in Tariffs (PBFiTs)**

##### **1. What, if any, purpose do PBFiTs play in meeting Hawaii's clean energy and energy independence goals, given Hawaii's existing renewable energy purchase requirements by utilities?**

There is a gulf between the positions of the parties in this docket on this issue that is based on a fundamental difference in the perceived role and purpose of feed-in tariffs for Hawaii. At one side is a conception of feed-in tariffs as the primary means to bring on large amounts of all sizes of renewable generation resources quickly, as seen in the European feed-in tariff implementation. At the other is a conception of feed-in tariffs as a niche application of standard offer contracts for a limited amount of renewable distributed

generation. Spanning this gulf of perspectives are several policy and factual issues that beg resolution.

The question of whether feed-in tariffs should be the primary procurement mechanism or only a niche mechanism begs resolution of the roles and interrelationships of all of the procurement methods that will be used to acquire Hawaii's renewable generation resources. This is essentially issue number six below. This is a broad policy determination.

In deciding whether feed-in tariffs or other methods should be the primary means of renewable generation procurement (and in either case as well) several factual questions are necessary to consider that, unfortunately, are not yet addressed by sound evidence or analysis:

- How much renewable generation can be integrated into the existing utility generation and transmission grids?
- What measures will be taken (and when) to increase the amount of additional generation that can be accommodated and by how much?
- How much of the existing and future capacity of the generation and transmission grids to accommodate additional renewable generation will be displaced by large grandfathered projects or by projects acquired by unsolicited bids or competitive bidding?
- How much curtailment of resources would be necessary if increasing amounts of new renewable generation is acquired?

HDA maintains that some reliable information regarding these questions is necessary to determine the best purpose for feed in tariffs for Hawaii.



**2. What are the potential benefits and adverse consequences of PBFiT's for the utilities, ratepayers and the state of Hawaii?**

PBFiT's could potentially provide large amounts of renewable energy resources for the State of Hawaii. One potential adverse consequence would be higher near term retail electricity prices resulting from levelized contracts that could be substantially higher than near term avoided costs. The magnitude of rate impacts has not been determined but is important to consider to, among other things, determine whether large customer exit to self-generation using fossil fuels should be a concern.

**3. Why is or is not the PBFiT the superior methodology to meet Hawaii's clean energy and energy independence goals?**

HDA does not have a position on this issue at this time.

**B. Legal Issues**

**4. What, if any, modifications are prudent or necessary to existing federal or state laws, rules, regulations or other requirements to remove any barriers or to facilitate the implementation of a feed-in tariff not based on avoided costs?**

Legislation is now proceeding through the current Hawaii legislative session to amend HRS 269-27.2 to remove the prohibition for the Commission to establish wholesale rates above avoided cost. Two essentially identical bills (HB1270 and SB461) are proceeding unopposed and are likely to become law. Federal PURPA law, of course, remains. HDA cites here its response to question number 1 in HDA's Response to Threshold Legal Questions in Appendix C of the scoping paper in this docket.

**5. What evidence must the commission consider in establishing a feed-in tariff and has that evidence been presented in this investigation?**

As stated in its SOP, and above in this brief, HDA maintains that there is important evidence missing regarding several matters in this investigation. HDA notes that little, if any, of the information sought in Appendix A: Cost Data Forms of the scoping paper in this docket or any similar data sufficient to determine FiT tariffs based on project cost has been submitted. Evidence regarding rate impacts is entirely missing.

Regarding the standard for sufficient evidence, HDA asserts that the same standard of a preponderance of substantial, probative evidence that would apply in a rate case should apply in determining wholesale rates.

**C. Role of Other Methodologies**

**6. What role do other methodologies for the utility to acquire renewable energy play with and without a PBFiT, including but not limited to power purchase contracts, competitive bidding, avoided cost offerings and net energy metering?**

There are several existing methods for procurement of renewable energy resources in Hawaii, including net energy metering, unsolicited bids, competitive bidding and avoided cost offerings per Schedule Q tariffs. The role and relationship between each of these procurement methods is not clear and should be clarified. For each type and size of potential new renewable generation resource there should be an appropriate procurement mechanism and this should be clearly designated. If there is limited capacity for new

renewable generation then the relationship of limits, caps and queues for the various procurement mechanisms needs to be clearly determined.

**D. Best Design for a PBFiT or alternative method**

- 7. What is the best design, including the cost basis, for PBFiTs or other alternative feed-in tariffs to accelerate and increase the development of Hawaii's renewable energy resources and their integration in the utility system?**

HDA does not have a position on this issue pending more information regarding how much new renewable generation of each type could be accommodated on the existing and future generation and transmission grids. Until this information is established it is difficult to determine a prudent tariff design, whether the tariffs should attempt to capture modest amounts of the most cost-effective generation or large amounts of generation at the higher end of the range of project-based costs. See HDA's SOP points 2 and 3.

HDA notes that some types of generation resolve rather than exacerbate grid integration issues. For resources that are firm and/or dispatchable more aggressive pricing could be established. A feed-in tariff design could unbundle some component of the price offered to compensate for ancillary services.

**E. Eligibility Requirements**

- 8. What renewable energy projects should be eligible for which renewable electricity purchase methods or individual tariffs and when?**

HDA does not have a position on this issue.

**F. Analysis of the cost to consumers and appropriateness of caps**

- 9. What is the cost to consumers and others of the proposed feed-in tariffs?**



The cost to consumers of the proposed feed-in tariffs is entirely unknown. No information on this issue has been submitted prior to this FSOP.

**10. Should the commission impose caps based upon these financial effects, technical limitations or other reasons on the total amount purchased through any mechanism or tariff?**

To the extent that there is limited capacity or need for new generation resources on the utility generation and transmission grids it would be necessary either to establish some limits to prevent unneeded generation or excessive curtailment of generation resources or to willingly finance unneeded or curtailed energy. If limits are provided there would have to be some method of establishing queues to determine which projects would have priority within the limited capacity. If queues are established, the relationship between the queues and available capacity would have to address projects in and the relationship between all of the resource procurement methods.

**G. Procedural Issues**

**11. What process should the commission implement for evaluating, determining and updating renewable energy purchased power mechanisms or tariffs?**

The Commission could consider evaluating all of its renewable generation procurement procedures to assure that they comprise a cohesive set of consistent policies. It is not clear now, for example, what is the relationship between unsolicited bids and other procurement methods. If there are queues under limits the relationships of the different procurement methods will become important.

The Commission could identify a period of time, perhaps two years, for a review of any mechanisms or tariffs that are established.

**12. What are the administrative impacts to the commission and the parties of the proposed approach?**

This is not clear. The administrative requirements would depend on several matters that are not determined. If limits are necessary on the amounts of new generation, for example, then a feed-in tariff approach could require substantial administrative oversight in establishing and revising limits, queues and adjudicating disputes. In the best of worlds, without limits on the amounts of new generation feed-in tariffs might be easy to administer.

HDA looks forward to further resolution of the issues in this docket during the Panel Hearings.

Dated: March 28, 2009; Haiku, Hawaii

Signed: CARL FREEDMAN

Carl Freedman  
dba Haiku Design and Analysis

CERTIFICATE OF SERVICE

The foregoing HAIKU DESIGN AND ANALYSIS FINAL STATEMENT OF POSITION was served by electronic transmission on the date of signature below to the following parties in this docket except that as noted the Division of Consumer Advocacy was also served two copies on the same date by first class mail:

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Dated: March 28, 2009; Haiku, Hawaii

Signed: CARL FREEDMAN  
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